

REMARKS

Applicant respectfully requests reconsideration of this application in light of the remarks made herein.

Claims 1 and 56-58 stand rejected under § 103(a) as being obvious over U.S. Patent No. 5,442,500 to Hidano et al. (hereinafter referred to as "Hidano") in view of U.S. Patent No. 6,424,603 to Matsushima (hereinafter referred to as "Matsushima"). Claim 56 stands rejected for indefiniteness under 35 U.S.C. § 112. Claim 57 is objected to for double patenting. Claims 7-11 are objected to as being dependent upon a rejected base claim.

Applicant respectfully requests that the Examiner allow the above case based on the arguments below or speedily make the examination final to expedite this case for Appeal.

Rejections 35 U.S.C. § 112

Claim 56 stands rejected under 35 U.S.C. § 112 for insufficient antecedent basis for "said robotic magazine transport device". Applicant amended claim 56, in the *Response After Final* filed on August 28, 2006, to delete the word "robotic."

Double Patenting Objection

Claim 57 stands objected to under 37 CFR 1.75 as being a substantial duplicate of claim 56. Applicant submitted, in the *Response After Final* filed on August 28, 2006, that claim 57 describes subject matter of a different scope when compared to amended claim 56. Specifically, claim 57 currently further describes the magazine transport device of claim 56 as being robotic. As such, Applicant submitted that the double patenting rejection with regard to claims 56 and 57 should be withdrawn.

Rejections Under 35 U.S.C. § 103

Claims 1, 56, 57 and 58 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Hidano in view of Matsushima.

Hidano is directed to increasing the capacity of a storage system. Hidano purports to accomplish this by providing a "main unit 21" with racks 2a and optional "extension units 22" with more racks 2a. Hidano's storage system is a cartridge storage system that exchanges tape cartridges from outside the storage system to inside the storage system via a drawer 52 assembly that holds a magazine 30. The magazine 30 serves the purpose of performing the function of an additional rack 2a, see FIG. 5, that is not intended to be moved within the storage system. Once loaded from the outside, the cartridges in the magazines 30 are positioned to be flush and aligned with the cartridges disposed in the racks 2a, thus functioning as "exchange racks". As shown in Hidano's FIG. 2, the magazines 30 serve as a tape rack 2b wherein tapes are able to be exchanged for use with the storage system, one at a time, at the expense of speed and density (a high density library is a library that optimally uses the space inside the library to pack as many tapes, and other component, as efficiently as possible).

The Examiner asserts that Hidano comprises "a cabinet 3; a shelf system 2b, located within the cabinet, for supporting at least two data cartridge magazines 30 and including at least one shelf; a drive 95 that is located within the cabinet; a magazine transport device 52, located within the cabinet, [for moving a data cartridge magazine within a portion of an interior volume defined by said cabinet]; a cartridge transport device, located within the cabinet, for moving a data cartridge 10 between a data cartridge magazines and the drive (Column 4, lines 25-31); and an entry/exit port 51 for conveying a data cartridge magazine between an environment that is exterior to the cabinet and a space that is interior to the cabinet; wherein the space is accessible to the magazine transport device." The Examiner admits that "Hidano et al does not show that the magazine transport device moves the data cartridge magazine within a portion of an interior volume defined by the cabinet; and the magazine transport device so that the magazine transport device can move a data cartridge magazine between the space and the shelf of the shelf system." [sic] The Examiner asserts that Matsushima makes up for Hidano's deficiencies.

Matsushima is directed to a library apparatus that reduces the number of motors incorporated in the library with the motivation to simplify construction, down-size the library and reduce cost (see summary of the invention). The library is adapted to load a single magazine that houses a plurality of data cartridges through a single opening in the library via a combination cartridge and magazine loading and unloading device. The combination cartridge and magazine loading and unloading device saves on size, internal space (i.e., Matsushima is striving for density) and reduces the number of parts relative to the state of the art single magazine system.

The Examiner asserts that “Matsushima teaches a cartridge transporting means [that] can be also used as [a] magazine transport device for moving the data cartridge magazine within a portion of an interior volume defined by the cabinet; and the magazine transport device so that the magazine transport device can move a data cartridge magazine between the space and the shelf of the shelf system (Column 3, lines 12-24). Matsushima also teaches that this system will reduce [the] number of motors and parts for simplification of the construction, contributing to downsizing of the apparatus (Column 2, lines 62-67). One of ordinary skill in the art would have been motivated to modify the cartridge transporting device as taught by Matsushima to include [the] magazine transporting function, thus add more function on it and at the same time reducing the size of the apparatus.”

As an initial matter, Applicant notes that the Examiner misquoted claim language in the above recitation; namely, the Examiner substituted “a data cartridge magazine” for the claim language “at least one of said [“at least two”] data cartridge magazines”. This is one of the features believed to distinguish over the Matsushima reference. In addition, the Examiner asserted that Hidano shows the feature “for moving a data cartridge magazine within a portion of an interior volume defined by said cabinet”, which is bracketed for indication, and then the Examiner asserted that, in fact, Hidano does not show this feature. Applicant believes that the Examiner has mistakenly asserted that this feature is in Hidano.

The Examiner asserts that Hidano shows “a shelf system 2b, located within the cabinet, for supporting at least two data cartridge magazines 30 and including at least one shelf.” The Examiner is incorrect in contending that Hidano’s rack element 2b corresponds to Applicant’s shelf system. Applicant’s shelf system is characterized in the claims as “for supporting at least two data cartridge magazines and comprising at least one shelf” wherein “said magazine transport device can move one of said data cartridge magazines between said interior space and said shelf of said shelf system”. In contrast, Hidano’s purported magazine transport 52 (a slide table) not only moves a magazine towards the interior of the library but provides the sole support for the magazine. Such an apparatus hardly corresponds to Applicant’s two distinct apparatuses, a magazine transport device and a shelf system, because Applicant’s shelf system provides a distinct and separate function from Applicant’s magazine transport device.

The Examiner asserts that Matsushima makes up for deficiencies in Hidano because Matsushima purportedly “teaches a cartridge transporting means [that] can be also used as [a] magazine transport device for moving the data cartridge magazine within a portion of an interior volume defined by the cabinet; and the magazine transport device so that the magazine transport device can move a data cartridge magazine between the space and the shelf of the shelf system (Column 3, lines 12-24).” In contrast, Applicant has “a magazine transport device” and “a cartridge transport device”, which are two separate devices, unlike Matsushima. One advantage of having a magazine transport device and a separate cartridge transport device is that a first magazine can be moved from an entry/exit port via a magazine transport device, then moved within the library via the magazine transport device, and then disposed on a shelf via the magazine transport device, and later a second magazine can be moved within the library. A cartridge transport can then move a data cartridge from a magazine to a drive (See FIGS. 7A-8B). Another difference is that Matsushima does not “move one of said data cartridge magazines between said interior space and said shelf of said shelf system” as recited by Applicant’s claim 1 because Matsushima’s library cannot support more than one magazine as defined in Applicant’s claim 1. Hence, Matsushima shelf cannot support “at

least two data cartridge magazines", nor can Matsushima's library support at least two data cartridge magazines.

Even assuming, *arguendo*, that the Hidano and Matsushima references disclose all of Applicant's recited elements in claim 1, there would not be a reasonable expectation of success because such a combination is inconsistent with the intentions of both Hidano and Matsushima. When the references are combined, there must be a reasonable expectation of success. *In re Vaeck*, 947 F. 2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). Even in light of the Supreme Court's opinion in *KSR vs. Teleflex*, one of ordinary skill in the relevant field would not have been motivated to combine a small single tape magazine unit like that of Matsushima, which is intended for low expense and low storage capacity, with Hidano's large, expandable, high capacity cassette library, which is intended to move only single tape cassettes within the library. The Examiner's entrenched approach that Hidano provides a library that uses a magazine, a drawer, a magazine entry port, a drive and a cartridge transport ignores these components' respective interrelationship and therefore the functionality, spirit and intention of Hidano. For example, Hidano's use of magazines 30 is inapposite to that claimed by Applicant because Hidano's magazines 30 serve the purpose of performing the function of cartridge shelf 2b, which is basically an additional rack 2a, see FIG. 5. The magazines 30 are not intended to be moved within the storage system. A robotic transport device 80 and picker 81 indiscriminately moves a single data cartridge from either a permanent rack 2a or the magazine rack 2b to a drive and back again. The magazines 30, which make up the rack 2b, are loaded with tapes from the outside and positioned to be flush and aligned with the cartridges disposed in the racks 2a, thus functioning transparently as the racks 2a. Furthermore, even though the Supreme Court rejected a "rigid" application of the "teaching, suggestion, or motivation" (TSM) test, there is justifiable cause for application of the TSM test here because, in the absence of any objective teaching in the prior art that would lead an individual to combine the relevant teachings of the references, one skilled in the art would not have been motivated to combine any references that would lead to

the creation of a contorted, dysfunctional, aberration dislike that of Applicant's claimed invention.

Furthermore, the Examiner's proposed motivation ignores that Hidano's invention is at odds with Matsushima. The Examiner proposes that "One of ordinary skill in the art would have been motivated to modify the cartridge transporting device as taught by Matsushima to include [the] magazine transporting function, thus add more function on it [Hidano] and at the same time reducing the size of the [Hidano's] apparatus." Hidano is striving to increase capacity while fully embracing the resultant increased library size, while in contrast, Matsushima is striving to make a smaller, denser library. Such a proposed motivation misconstrues the nature of the references, Hidano and Matsushima.

For at least the reasons stated above, Applicant respectfully submits that claim 1 is not obvious and allowable over Hidano in view of Matsushima.

Independent claim 56 is rejected under 35 U.S.C. §103(a) as being unpatentable over Hidano in view of Matsushima.

The Examiner asserts that Hidano in view of Matsushima "is a magazine-based data cartridge library including: a cabinet defining an interior space; a shelf system in the interior space adapted to support at least a first and second data cartridge magazine." With reference to the shelf system, the Examiner incorrectly asserts that Hidano's rack element 2b is analogous to Applicant's shelf system. Applicant's shelf system recites being "adapted to support at least a first and second data cartridge magazine" wherein a "magazine transport device is capable of moving the magazine within the interior space to the shelf system". In contrast, Hidano's purported magazine transport 52 (a slide table) not only moves a magazine towards the interior of the library, but provides the sole support for the magazine. Such an apparatus hardly corresponds to Applicant's two distinct apparatuses, a magazine transport device and a shelf system, because Applicant's shelf system provides a distinct and separate function from Applicant's magazine transport device. Matsushima does not make up for this deficiency because Matsushima's shelf cannot support more than one magazine and certainly does not

disclose, teach or suggest functional recitations directed to Applicant's shelf and magazine transport system.

The Examiner further asserts that "a magazine transport device capable of transporting within the interior space one of the magazines from the shelf system to a position for a cartridge transport to move at least one data cartridge from the data cartridge magazine to a cooperating relationship with the first drive." Neither Hidano nor Matsushima disclose, teach or suggest Applicant's recited feature of transporting a magazine from a shelf system to a position inside the library in order for a cartridge transport to move a cartridge from the magazine to a drive. This feature is simply absent from the applied art of record. For at least the reason that neither Hidano nor Matsushima disclose, teach or suggest all of the recited features of claim 56 Applicant respectfully submits claim 56 is allowable over the prior art of record.

Claim 57 depends directly from claim 56 and, as discussed above, is distinguishable over Hidano in view of Matsushima because neither Hidano nor Matsushima disclose, teach or suggest all of the recited features of claim 56 from which claim 57 depends. Therefore, Applicant respectfully submits that claim 57 is allowable.

Independent claim 58 is rejected under 35 U.S.C. §103(a) as being unpatentable over Hidano in view of Matsushima. Claim 58 has been amended herein to make corrections to errors in antecedent basis and to clarify the claimed invention. As such, none of the language added to this claim deviates from the scope of the claims examined and therefore does not prompt or require a new search. With reference to the shelf system, the Examiner incorrectly asserts that Hidano's rack element 2b is analogous to Applicant's shelf system. Applicant's shelf system recites being "adapted to support at least a first and second data cartridge magazine" and "a magazine transport device, confined to said interior space and adapted to move one of said magazines received by said entry/exit port within said interior space either to said shelf system or to a location in proximity to said drive..." In contrast, Hidano's purported magazine transport 52 is not only moves a magazine towards the interior of the library, but provides the sole support for the magazine. Such an apparatus hardly corresponds to Applicant's two distinct

apparatuses, a magazine transport device and a shelf system, because Applicant's shelf system provides a distinct and separate function from Applicant's magazine transport device. Matsushima does not make up for this deficiency because Matsushima's shelf cannot support more than one magazine and certainly does not disclose, teach or suggest functional recitations directed to Applicant's shelf and magazine transport system.

Furthermore, neither Hidano nor Matsushima disclose, teach or suggest the recited feature, "said magazines received by said entry/exit port within said interior space either to said shelf system or to a location in proximity to said drive, said location is other than said shelf system, whereby at least one of said data cartridges corresponding to said and supported by said one of said magazines received by said entry/exit port is made available for use by said drive." For at least the reason that neither Hidano nor Matsushima disclose, teach or suggest all of the recited features of claim 58, and therefore, Applicant respectfully submits claim 58 is allowable over the prior art of record.

Claim Objections

According to the Office Action, claims 7-11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Dependent claims 7-11 depend directly or indirectly from independent claim 1 which, as discussed above, is patentable over Hidano in view of Matsushima, and therefore Applicant submits claims 7-11 are allowable as being dependent from claim 1.

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Authorization To Charge Necessary Fees

The Commissioner is hereby authorized to charge any additional necessary fees associated with this submission, or credit any overpayment, to Deposit Account No. 50-3010.

Respectfully submitted,

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